



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):

Schwartz-Albiez, et al.

Examiner:

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Serial No.:

10/594,382

Group Art Unit:

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September 26, 2006

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International

Application No.:

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Docket:

294-262 PCT/US

International

Filing Date:

March 31, 2005

Dated:

January 9, 2007

For:

METHOD FOR

EXPANDING

POSTEMBRYONIC

STEM AND

PROGENITOR CELLS FROM UMBILICAL CORD BLOOD AND

IMMUNOTHERA-PEUTIC AGENT I hereby certify this correspondence is being deposited with the United States Postal Service as first class

mail, postpaid in an envelope, addressed to:
Commissioner for Patents, P.O. Box 1450

Alexandria, Virginia 22313-1450

on <u>January 9, 2007</u>

Signatures

Mail Stop: Amendment Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In order to fulfill the requirements of candor and good faith set forth in 37 C.F.R. §1.56, Applicants submit herewith the following Information Disclosure Statement in accordance with the provisions of 37 C.F.R. §1.97 and §1.98.

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Filed: September 26, 2006 Our Docket: 294-262 PCT/US

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FOREIGN PATENT DOCUMENTS

<u>COUNTRY</u> <u>PUBLICATION NO.</u> <u>PUBLICATION DATE</u>

Germany DE 102 45 927 A April 15, 2004

NON-PATENT PUBLICATIONS

- 1. Theunissen, et al., "Long-term engrafting umbilical cord blood cells are preserved after ex vivo culture in stroma-free culture," *Online!* May 2001, http://mmserver.cjp.com/gems/blood/ABMT.10.verfaillie.pdf, pgs 599-603.
- 2. Pankaj, et al., "Human LTC-IC can be maintained for at least 5 weeks in vitro when interleukin-3 and a single chemokine are combined with o-sulfated heparin sulfates: Requirement for optimal binding interactions of heparin sulfate with early-acting cytokines and matrix proteins," *Blood* January 2000, 95(1):147-155.
- 3. Pankaj, et al., "Structurally specific heparin sulfates support primitive human hematopoiesis by formation of a multimolecular stem cell niche," *Blood* December 1998, 92(12):4641-4651.
- 4. Lewis, et al., "Umbilical cord blood cells capable of engrafting in primary, secondary, and tertiary xenogeneic hosts are preserved after ex vivo culture in a noncontact system," *Blood* June 2001, 97(11):3441-3449.
- 5. Schubert, "Einfluss regioselektiv modifizierter Heparansulfate auf den Erhalt and die Expansion primitiver hamatopoietischer Stammzelle and Vorlauferzellen," *Online!* 2004, http://doctor-schubert.de/downloads/Dissertation%20M.Schubert.pdf.

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6. Punzel, et al., "The microenvironment of AFT024 cells maintains primitive

human hematopoiesis by counteracting contact mediated inhibition of proliferation." Cell

Communication & Adhesion, May-June 2002, 9(3):149-159.

7. Gupta, et al., "Artificial 'proteoglycan-like' molecules containing heparin sulfate

enhance the ability of cytokines to maintain human hematopoietic stem cells in vitro,"

Journal of Investigative Medicine, 1995, 43(SUPL.2):342A.

8. Moore, et al., "In vitro maintenance of highly purified, transplantable

hematopoietic stem cells," *Blood*, 1997, 89(12):4337-4347.

9. Moore, et al., "Hematopoietic Activity of a Stromal Cell Transmembrane Protein

Containing Epidermal Growth Factor-Like Repeat Motifs," Proceedings of the National

Academy of Sciences of USA, April 1997, 94:4011-4016.

10. Stringer, et al., "Identification of an MIP-1alpha-binding heparin sulfate

oligosaccharide that supports long-term in vitro maintenance of human LTC-ICs," Blood,

March 2003, 101(6):2243-2245.

Each of the above references were listed in the International Search Report issued in

the corresponding International Application. A copy of the International Search Report was

previously filled with the application.

Copies of the cited references should have been provided by the International

Searching Authority. Upon receipt of a Notification of Acceptance of Application indicating

what items have been received by the Patent and Trademark Office, Applicant will review the

same to ensure that the references were provided.

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The references are listed on Applicant's Form PTO-1449, which is attached to this

Information Disclosure Statement for the convenience of the Examiner. Applicant requests

consideration of each of the documents listed on the attached Form PTO-1449, and that such

consideration be indicated by initialing each citation thereon.

This Statement is being filed before the mailing of a first Office Action on the merits.

Applicant believes that no fee for this submission is due. If, however, a fee is due for entry of

this Information Disclosure Statement, the Office is authorized to charge Deposit Account

No. 08-2461 for any such fee.

If there are any questions regarding this submission, please contact Applicant's

attorney at the phone number listed below.

Respectfully submitted,

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use several sheets if necessary)

ATTY. DOCKET NO.	SERIAL NO.
294-262 PCT/US	10/594,382
APPLICANT	CONFIRMATION NO.
Schwartz-Albiez, et al.	Unassigned
FILING DATE	GROUP
September 26, 2006	Unassigned

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	_	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION	
							YES	NO
		DE 102 45 927 A	04/15/2004	Germany				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) Theunissen, et al., "Long-term engrafting umbilical cord blood cells are preserved after ex vivo culture in stroma-free culture," Online! May 2001, http://mmserver.cjp.com/ gems/blood/ABMT.10.verfaillie.pdf, pgs 599-603. Pankaj, et al., "Human LTC-IC can be maintained for at least 5 weeks in vitro when interleukin-3 and a single chemokine are combined with o-sulfated heparin sulfates: Requirement for optimal binding interactions of heparin sulfate with early-acting cytokines and matrix proteins," Blood January 2000, 95(1):147-155. Pankai, et al., "Structurally specific heparin sulfates support primitive human hematopoiesis by formation of a multimolecular stem cell niche," Blood December 1998, 92(12):4641-4651. Lewis, et al., "Umbilical cord blood cells capable of engrafting in primary, secondary, and tertiary xenogeneic hosts are preserved after ex vivo culture in a noncontact system," *Blood* June 2001, 97(11):3441-3449. Schubert, "Einfluss regioselektiv modifizierter Heparansulfate auf den Erhalt and die Expansion primitiver hamatopoietischer Stammzelle and Vorlauferzellen," Online! 2004, http://doctorschubert.de/downloads/Dissertation%20M.Schubert.pdf.

EXAMINER

DATE CONSIDERED

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	U.S. DEPARTMENT OF COMMERCE FENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. SERIAL NO. 10/594,382				
	IFORMATION DISCLOSURE TATEMENT BY APPLICANT	APPLICANT Schwartz-Albiez, et al.	CONFIRMATION NO. Unassigned			
(Use	e several sheets if necessary)	FILING DATE September 26, 2006	GROUP Unassigned			
	human hematopoiesis by count proliferation." Cell Communic 159. Gupta, et al., "Artificial 'protected sulfate enhance the ability of cells in vitro," Journal of Investigation	the microenvironment of AFT024 cells maintains primitive biesis by counteracting contact mediated inhibition of Cell Communication & Adhesion, May-June 2002, 9(3):149-rtificial 'proteoglycan-like' molecules containing heparin the ability of cytokines to maintain human hematopoietic stem burnal of Investigative Medicine, 1995, 43(SUPPL2):342A.				
		Blood, 1997, 89(12):4337-4347.				
	Protein Containing Epidermal	poietic Activity of a Stromal Cell Transmembrane dermal Growth Factor-Like Repeat Motifs," onal Academy of Sciences of USA, April 1997, cation of an MIP-1alpha-binding heparin sulfate oports long-term in vitro maintenance of human LTC-3, 101(6):2243-2245.				

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EXAMINER

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